

Amendments to the Specification

Please replace the paragraph beginning at page 2, line 25, with the following rewritten paragraph:

As described above, the fluidized bed gasification reactor has a feature in that it imposes less restriction on the size and properties of introducible fuels. However, in the case of a fuel containing incombustibles such as coal or wastes, if such fuel having a large size is introduced as it is, then the incombustibles remaining within the reactor become large, and thus such incombustibles are required to be discharged from the reactor by some methods. However, withdrawing the fluidized medium at a high temperature of 500°C to 600°C from the fluidized bed is very difficult due to its high temperature even in the atmospheric-pressure reactor, and hence is hardly possible in the gasification furnace operated under pressure. Even if the fluidized medium can be successfully withdrawn from the fluidized bed, the withdrawal of the high-temperature fluidized medium causes large heat loss which reduces the efficiency of heat utilization. Further, in withdrawing the fluidized medium, a large amount of char included in the fluidized medium may be combusted upon contact with air, leading to unexpected troubles.

Please replace the paragraph beginning at page 4, line 23, with the following rewritten paragraph:

Further, the fluidized-bed reactor used in the present invention is preferably divided into units performing respective functions so that the fluidized-bed reactor can easily deal with fuels having different properties by changing the combination of ~~each of~~ units.

Please replace the paragraph beginning at page 7, line 2, with the following rewritten paragraph:

The interiors of the fluidized-bed unit 1 and the units below the fluidized-bed unit 1 are filled with a fluidized medium 11. The fluidized medium above the fluidizing gas dispersion device 6 is fluidized by a fluidizing gas blown from the fluidizing gas dispersion nozzles 7 to

form a fluidized bed 8. ~~An~~A fluidizing gas header 9 comprising at least two divided segments ~~are~~is housed in the fluidizing gas dispersion device 6, and the velocity of the fluidizing gas blown from the fluidizing gas dispersion nozzles 7 is regulated so that the velocity of the fluidizing gas blown into the peripheral portion is larger than the velocity of the fluidizing gas blown into the central portion, thereby developing internal revolving flows 12 of the fluidized medium in the fluidized bed. The temperature of the fluidized medium over the fluidizing gas dispersion device 6 is kept at 400°C to 1,000°C, preferably 500°C to 800°C.

Please replace the paragraph beginning at page 9, line 3, with the following rewritten paragraph:

The medium discharge device unit 3 is connected to the lower end of the under-furnace chute unit 2. The inner side of the under-furnace chute unit 2 in the gasification furnace according to this embodiment is inclined so as to correspond to the size of the inlet of the medium discharge device unit 3, and hence is throttled as a whole. When incombustibles having a possibility of forming a bridge due to the throttle, for example, incombustibles such as wires, are required to be discharged, a straight vertical wall may, of course, be adopted, or alternatively the inner side may be eccentric so as to have both a vertical section and an inclined section.

Please replace the paragraph beginning at page 15, line 9, with the following rewritten paragraph:

In the case of a system having no seal mechanism in the section for withdrawing the fluidized medium, as shown in FIG. 5, special attention should be paid to the possibility that steam introduced from the lowermost part of the gasification furnace 101 does not flow into the fluidized bed section but into the conveyor 104. Such a flow causes steam to condense in the conveyor and to thus moisten the fluidized medium. This is often causative of deteriorated handling and adhesion of fines of limestone or gypsum contained in the fluidized medium. In addition, since the steam does not flow toward the fluidized bed section, a purging function to be

expected by steam is not exerted, and hence troubles associated with tar or char in the chute for withdrawing the fluidized medium occur.

Please replace the paragraph beginning at page 16, line 18, with the following rewritten paragraph:

(2) Blowing steam, CO₂, or oxygen-free gas through nozzles provided at the lower part of each of the chutes to vigorously fluidize the fluidized medium permits incombustibles to be actively moved. This can eliminate a clogging trouble in the chute section.